



# FINANCIAL LITERACY

## MONEY MANAGEMENT

# QUICK START GUIDE

## THE STATIONS OF STEM<sup>®</sup> FRAMEWORK

Our activity cards are designed to be dynamic and adaptable to your unique classroom environment. While each card highlights one primary Station of STEM<sup>®</sup> in its step-by-step instructions, many cards feature alternative or secondary stations. This dual-station layout serves two major instructional purposes:

### Differentiated Learning

It allows you to pivot the activity based on student learning preferences (e.g., shifting a student from a text-heavy coding challenge to a visual digital storytelling track).

### Resource Management

It gives you the flexibility to run these challenges using whatever supplies, hardware, or devices are most readily available in your classroom today.

## FINANCIAL LITERACY AND ALGORITHMIC FOUNDATIONS

**Mathematics and computational logic are deeply integrated into every card.** Students don't just memorize definitions; they actively deploy calculations, mathematical models, and block-based or text-based code to solve financial problems across six core strands. The standard formulas your students will use across each activity set are detailed on the next pages, translated into student-friendly language.

## NATIONAL EDUCATIONAL STANDARDS ALIGNMENT



To ensure rigorous academic value, all content within this deck is strictly aligned with the [National Standards for Personal Financial Education](#) established by the Council for Economic Education (CEE).

These benchmarks are targeted specifically at the Early Secondary (end of 8th grade) level, providing clear, standards-based guidance to help students develop essential real-world competencies and critical thinking skills before they transition to high school.

## BEYOND THE CARDS: EXTENDED RESOURCES

- ✦ [Reality Check](#)  
An online tool to see the level of income you will need to support the life you imagine
- ✦ [JumpStart Financial Foundations for Educators](#)  
A content-based professional development made for teachers or adult learners
- ✦ [Next Gen Personal Finance Arcade](#)  
Engaging financial decision-making games to help boost critical thinking skills
- ✦ [Banzai!](#)  
Learn important personal finance life skills through scenario-based games

**SPENDING**



**EARNING INCOME**

Middle school math focuses heavily on percentages, decimals, and basic multi-step word problems for this unit.



**Gross vs. Net Pay**

Students calculate total earnings based on time, then subtract deductions. The formula:

$$\text{Gross Pay} = \text{Hourly Rate} \times \text{Hours Worked}$$

$$\text{Net Pay} = \text{Gross Pay} - \text{Total Deductions}$$

**Earning Potential & Budgets**

This involves calculating a basic surplus or deficit. The formula:

$$\text{Budget Balance} = \text{Total Income} - \text{Total Expenses}$$

(A positive result is a surplus/savings; a negative result is a deficit.)



**SAVING**

This is where middle schoolers usually get their first look at linear vs. exponential relationships.



**Simple Interest**

The formula:

$$I = P \times r \times t$$

Where I = Interest earned, P = Principal (starting money), r = Annual interest rate (as a decimal), and t = Time (in years).

**Compound Interest (Annual)**

While the fully loaded compound interest formula can be complex, middle schoolers typically use the basic annual version to match their pre-algebra skills. The formula:

$$A = P(1 + r)^t$$

Where A = Total amount of money at the end, P = Principal, r = Annual interest rate (decimal), and t = Time (years).

**The Rule of 72**

A mental math trick to figure out how fast money doubles. The formula:

$$\text{Years to Double} = \frac{72}{\text{Interest Rate}}$$

Note: For this specific shortcut formula, students leave the interest rate as a whole number (e.g., if the rate is 6%, they divide by 6, not 0.06).



**INVESTING**

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**MANAGING CREDIT**

For middle school, credit and investing formulas are essentially the saving formulas flipped upside down.

**Returns on Investments (ROI) or Bond Yields**

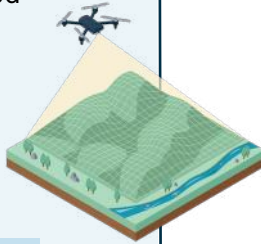
The formula:

$$ROI (\%) = \left( \frac{\text{Current Value} - \text{Original Cost}}{\text{Original Cost}} \right) \times 100$$

**Interest on a Loan**

Instead of complex amortization matrices, middle schoolers calculate standard, non-compounding interest on fixed loans (like a simple car loan or borrowing money from a friend). The formula:

$$\text{Total Cost of Loan} = \text{Amount Borrowed} + (\text{Amount Borrowed} \times \text{Interest Rate} \times \text{Time})$$



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**MANAGING RISK**

At this level, risk math is all about analyzing statistics, probability, and basic averages.

**The Insurance Money Pool (Calculating Premiums)**



To find out how much an insurance company needs to charge each person to cover accidents, students use basic division. The formula:

$$\text{Individual Premium} = \frac{\text{Total Expected Cost of Accidents}}{\text{Total Number of People in the Pool}}$$

**Warranty Cost vs. Repair Cost**

Students look at expected value to decide if a warranty is worth it. The formula:

$$\text{Expected Repair Cost} = \text{Cost of a Fix} \times \text{Probability of it Breaking}$$

Decision: If the Warranty Cost is lower than the Expected Repair Cost, the warranty is statistically a good deal.

